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ABSTRACT

The claim that the best language teaching materials are based on a contrast of the two competing linguistic systems has long been a popular one in language teaching. It exists in strong and weak versions, the strong one arising from evidence from the availability of some kind of metatheory of contrastive analysis and the weak from evidence from language interference. The strong version of the hypothesis is untenable and even the weak version creates difficulties for the linguist. Recent advances in linguistic theory have led some people to claim that the hypothesis is no longer useful in either the strong or the weak version. Such a claim is perhaps unwarranted, but a period of quiescence is probable for contrastive analysis itself. (Author/AMM)

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THE CONTRASTIVE ANALYSIS HYPOTHESIS

The claim that the best language teaching materials are based on a contrast of the two competing linguistic systems has long been a popular one in language teaching. It exists in strong and weak versions, the strong one arising from evidence from the availability of some kind of metatheory of contrastive analysis and the weak from evidence from language interference. The strong version of the hypothesis is untenable and even the weak version creates difficulties for the linguist. Recent advances in linguistic theory have led some people to claim that the hypothesis is no longer useful in either the strong or the weak version. Such a claim is perhaps unwarranted, but a period of quiescence is probable for contrastive analysis itself.

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During the course of their reading students of linguistics encounter a number of very interesting hypotheses concerning different aspects of language and language function. One long-lived hypothesis which has attracted considerable attention from time to time--but more, it must be added, from psychologists and anthropologists than from linguists--is the Sapir-Whorf hypothesis with its claim that the structure of a language subtly influences the cognitive processes of the speakers of that language.

A much more recent hypothesis, and one much more intriguing to linguists today than the Sapir-Whorf hypothesis, is the language-acquisition device hypothesis proposed by the generative-transformationalists. This hypothesis is that infants are innately endowed with the

ability to acquire a natural language and all they need to set the process of language acquisition going are natural language data. Only by postulating such a language-acquisition device can a generative-transformationalist account for certain linguistic universals, including, of course, not only one very important universal, the ability to learn a first language with ease, but also, apparently, another universal, the inability to learn a second language after childhood without difficulty. Like the Sapir-Whorf hypothesis, the language-acquisition device hypothesis is extremely intriguing, but it too presents seemingly insurmountable difficulties to anyone seeking to devise a critical test to prove its truth or falsity. A linguist may accept the hypotheses because they usefully and economically explain certain language data that he wants to explain in terms of a set of axioms he can accept; or he may reject the hypotheses because they reek of mentalism or subjectivity, or because he prefers a different set of axioms on which to base his work.

Still a third hypothesis, and the one which is of special interest in this paper, is the contrastive analysis hypothesis, a hypothesis of particular interest to those linguists who are engaged in language teaching and in writing language teaching materials. However, the contrastive analysis hypothesis also raises many difficulties in practice, so many in fact that one may be tempted to ask whether it is really possible to make contrastive analyses. And even if the answer to that question is a more or less hesitant affirmative, then one may well question the value to teachers and curriculum workers of the results of such analyses.

Actually the contrastive analysis hypothesis may be stated in two versions, a strong version and a weak version. In this paper the claim will be made that the strong version is quite unrealistic and impracticable, even though it is the one on which those who write contrastive analyses usually claim to base their work. On the other hand, the weak version does have certain possibilities for usefulness. However, even the weak version is suspect in some linguistic circles.

It is possible to quote several representative statements of what has just been referred to as the strong version of the contrastive analysis hypothesis. First of all, Lado in the preface to Linguistics Across Cultures (1957) writes as follows:

> The plan of the book rests on the assumption that we can predict and describe the patterns that will cause difficulty in learning, and those that will not cause difficulty, by comparing systematically the language and culture to be learned with the native language and culture of the student. (p. vii)

Lado goes on to cite Fries in support of this proposition. Here is the appropriate quotation from Fries' Teaching and Learning English as a Foreign Language (1945):

> The most efficient materials are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner. (p. 9)

More recently, in a book edited by Valdman, entitled Trends in Language Teaching (1966), Banathy, Trager and Waddle state the strong version of the contrastive analysis hypothesis as follows:

> . . . the change that has to take place in the language behavior of a foreign language student can be equated with the differences between the structure of the student's native language and culture and that of the target language and culture. The task of the linguist, the cultural anthropologist, and the sociologist is to identify these differences. The task of the writer of a foreign language teaching program is

> to develop materials which will be based on a statement of these differences; the task of the foreign language teacher is to be aware of these differences and to be prepared to teach them; the task of the student is to learn them. (p. 37)

The same idea is presented in each of these three statements, the idea that it is possible to contrast the system of one language--the grammar, phonology and lexicon--with the system of a second language in order to predict those difficulties which a speaker of the second language will have in learning the first language and to construct teaching materials to help him learn that language.

An evaluation of this strong version of the contrastive analysis hypothesis suggests that it makes demands of linguistic theory, and, therefore, of linguists, that they are in no position to meet. At the very least this version demands of linguists that they have available a set of linguistic universals formulated within a comprehensive linguistic theory which deals adequately with syntax, semantics, and phonology. Furthermore, it requires that they have a theory of contrastive linguistics into which they can plug complete linguistic descriptions of the two languages being contrasted so as to produce the correct set of contrasts between the two languages. Ideally, linguists should not have to refer at all to speakers of the two languages under contrast for either confirmation or disconfirmation of the set of contrasts generated by any such theory of contrastive linguistics. They should actually be able to carry out their contrastive studies quite far removed from speakers of the two languages, possibly without even knowing anything about the two languages in question except what is recorded in the grammars they are using. Such seems to be the procedure which the strong version of the contrastive

analysis hypothesis demands of linguists. Stated in this way, the strong version doubtless sounds quite unrealistic, but it should be emphasized that most writers of contrastive analyses try to create the impression that this is the version of the hypothesis on which they have based their work--or at least could base their work if absolutely necessary. Here is yet another instance of a "pseudo-procedure" in linguistics, a pseudo-procedure being a procedure which linguists claim they could follow in order to achieve definitive results if only there were enough time.

If one looks specifically at how phonological problems have been dealt with in this strong version, he can easily find evidence to support the assertions just made. Many a linguist has presented contrastive statements of the phonemic systems of two languages without asking whether it is possible to contrast the phonemic systems of two languages by procedures which attempt to relate an English p to a French p, because linguists have chosen to symbolize some not well-defined similarity between the two languages in the same way, in this case by the letter p, or because both p's are associated with certain movements of the glottis and lips. The use of the similarity of the symbols is more deceiving than the use of the similarity of phonetic features. The latter may be justified to some extent in terms of what will be referred to later as the weak version of the hypothesis, but statements about a language lacking certain phonemes or two languages having the same phonemes are possibly even more dangerous than they are naive. Any such statements must ultimately rest on phonetic evidence, and, if they do, the strong version of the hypothesis is being disregarded in favor of the weak

version. As Weinreich (1953) points out, phonemes are not commensurable across languages; phones, individual sounds, are much more manageable, because they do have some connection with events in the world, in this case articulatory and acoustic events.

Let us suppose that a linguist contrasts the allophonic variants described in accounts he finds of the phonological systems of two languages. Could he then meet the demands of the strong version? Once again the answer must be negative, at least within the present state of linguistic knowledge. Ideally, a linguist interested in making a contrastive analysis would like to be able to take a statement of the allophones of Language A and say for each one exactly what difficulties a speaker of Language B would have in producing that allophone. However, the difficulties in the way of doing this are formidable. Are the phonetic statements the linguist finds sufficiently detailed and of the right kind to be of use: that is, what is the adequacy of the <u>phonetic theory</u> and the particular phonetic information at his disposal? Do the descriptions take into account all the phonological variables that should be taken into account, such as segmentation, stress, tone, pitch and juncture, and syllable, morpheme, word and sentence structures: that is, what is the state of the <u>phonological theory</u> he is using? Does the linguist have available to him an over-all contrastive system within which he can relate the two languages in terms of mergers, splits, zeroes, over-differentiations, under-differentiations, reinterpretations, and so on: that is, what is the state of the <u>contrastive theory</u> he is employing? In this age of linguistic uncertainty the answer to all of these questions is obvious.

It seems, therefore, not a little strange, given all the problems which the strong version of the contrastive analysis hypothesis creates, that so many linguists claim to use it in their work. None of them has actually conformed to its requirements in such work. However, there have been attempts, some more successful and some less successful, to use what may be called the weak version of the contrastive analysis hypothesis. In this case, one must offer his own definition of the weak version, because the literature contains little or no reference to what linguists have actually done in practice, in contrast to what they have claimed they were doing or could do.

The weak version requires of the linguist only that he use the best linguistic knowledge available to him in order to account for observed difficulties in second language learning. It does not require what the strong version requires, the prediction of those difficulties and, conversely, of those learning points which do not create any difficulties at all. The weak version leads to an approach which makes fewer demands of contrastive theory than does the strong version. It starts with the evidence provided by linguistic interference and uses such evidence to explain the similarities and differences between systems. There should be no mistake about the emphasis on systems. In this version systems <u>are</u> important, because there is no regression to any pre-systemic view of language, nor does the approach result in merely classifying errors in any way that occurs to the investigator. However, the starting point in the contrast is provided by actual evidence from such phenomena as faulty translation, learning difficulties, residual foreign accents,

and so on, and reference is made to the two systems only in order to explain actually observed interference phenomena.

A close reading of most of the contrastive analyses which are available shows them to conform to some of the demands made by the weak version of the theory and not at all to the demands of the strong version. Even the two highly regarded texts on English and Spanish by Stockwell and Bowen, The Sounds of English and Spanish (1965) and The Grammatical Structures of English and Spanish (1965), fall into this category. It appears that Stockwell and Bowen use their linguistic knowledge to explain what they know from experience to be problems English speakers have in learning Spanish. The linguistic theory they use is actually extremely eclectic and contains insights from generative-transformational, structural, and paradigmatic grammars; nowhere in the texts is there an obvious attempt to predict errors using an over-riding contrastive theory of any power. Even the hierarchy of difficulty which Stockwell and Bowen establish in the second chapter of the Sounds volume is based more on their experience and intuition than on an explicit theory for predicting difficulties.

In recent years there have been two still different approaches taken to the problems of contrastive analysis, both resulting from the current enthusiasm for generative-transformational theory. One of these approaches dismisses the hypothesis from any consideration at all. This dismissal stems from a strong negative reaction to contrastive analysis, as, for example, in recent articles by

Ritchie (1967) and Wolfe (1967) in Language Learning. The second approach attempts to use the generative-transformational model in order to provide some of the necessary over-riding theory to meet either the demands of prediction in the strong version or of explanation in the weak version.

The case for dismissal may be stated as follows: languages do not differ from each other without limit in unpredictable ways, statements to the contrary notwithstanding. All natural languages have a great deal in common so that anyone who has learned one language already knows a great deal about any other language he must learn. Not only does he know a great deal about that other language even before he begins to learn it, but the deep structures of both languages are very much alike so that the actual differences between the two languages are really quite superficial. However, to learn the second language--and this is the important point--one must learn the precise way in which that second language relates the deep structures to its surface structures and their phonetic representations. Since this way is unique for each language, contrastive analysis can be of little or no help at all in the learning task because the rules to be internalized are, of course, unique. Even though the form and some of the content of the rules to be acquired might be identical for both languages, the combinations of these for individual languages are quite idiosyncratic so that superficial contrastive statements can in no way help the learner in his task.

Now there is obviously some merit in the above argument. If the underlying vowel system of French is something like the one Schane outlines in French Phonology and Morphology (1968), and the underlying vowel system of English is something like the one Chomsky and Halle outline in The Sound Pattern of English (1968), and if the speaker of English must somehow internalize the underlying vowel system of French and the fifty or so phonetic realization rules which Schane gives in order to speak acceptable French, then one may easily be tempted to reject the whole notion of contrastive analysis as having anything at all to contribute to an understanding of the learning task that is involved.

Uncertainty is obviously piled upon uncertainty in making contrastive analyses. Such uncertainties arise from inadequacies in existing linguistic theories. As an example of theoretical inadequacy, one may observe that the notion of deep structure itself is extremely uncertain. Chomsky (1968), McCawley (1968) and Fillmore (1968) all mean somewhat different things by it, but all at least agree that it has something to do with meaning. However, for the purposes of contrastive analysis any claim that all languages are very much the same at the level of deep structure seems to be little more than a claim that it is possible to talk about the same things in all languages, which is surely not a very interesting claim, except perhaps in that it seems to contradict the one made by Sapir and Whorf. The preceding statement is not meant to be a criticism of generative-transformational theory: it is meant to show how acceptance of that theory can fairly easily lead one to reject the idea that it is possible to make contrastive

analyses, or, put less strongly, to reject the idea that generative-transformational theory has something to contribute to a theory of contrastive analysis, given the present state of the art.

Many experienced teachers find themselves unable to accept such reasons for rejection of the hypothesis. Their experience tells them that a Frenchman is likely to pronounce English think as sink and a Russian likely to pronounce it as tink, that a Spaniard will almost certainly fail to differentiate English bit from beat, and that an Englishman learning French will tend to pronounce the French word plume as pleem or ploom. They admit that in each case they must be prepared to teach the whole of the second language to a learner, but also insist that some parts of that second language are easier to learn than others, for no one ever must learn everything about the second language. However, many also admit that they do not know in what order learners should try to overcome the various difficulties they are observed to have. Should a Spaniard learning English learn to differentiate bit from beat and bet from bait because of the important surface contrasts which he does not make in Spanish? Or should he learn to associate the vowels in such pairs of words as weep and wept, pale and pallid, type and typical, tone and tonic, deduce and deduction so that he can somehow internalize the underlying phonological system of English? The mind boggles at this last possibility! But it is one which descriptions of Spanish and English based on generative-transformational theory would seem to hold out for teachers.

Some recent suggestions for using generative-transformational theory in contrastive analysis have actually been attempts to bring powerful theoretical insights to bear within the weaker version of the hypothesis in order to explain observed interference phenomena, for example some interesting work by Ritchie (1968) and by Carter (unpublished). In their work, Ritchie and Carter have used distinctive feature hierarchies in attempts to explain such problems as why a Russian is likely to say tink and a Frenchman sink for English think. Such work using the notions of feature hierarchy, rule-cycling, and morpheme and word structure rules has considerable possibilities. Certainly this kind of work seems more promising than some being done by others in an attempt to show gross similarities between deep structures in an assortment of languages.

In conclusion, it is fair to say that teachers of second or foreign languages are living in very uncertain times. A decade or so ago contrastive analysis was still a fairly new and exciting idea apparently holding great promise for teaching and curriculum construction. Now, one is not so sure--and not solely as a result of the Chomskyan revolution in linguistics. The contrastive analysis hypothesis has not proved to be workable, at least not in the strong version in which it was originally expressed. This version can work only for one who is prepared to be quite naive in linguistic matters. In its weak version, however, it has proved to be helpful and undoubtedly will continue to be so as linguistic theory develops. However, the hypothesis probably will have less influence on second language teaching and on course construction in

the next decade than it apparently has had in the last decade. One cannot predict whether that diminishing influence will have a good or bad effect on second language teaching. Today contrastive analysis is only one of many uncertain variables which one must re-evaluate in second language teaching. No longer does it seem to be as important as it once was. Perhaps like the Sapir-Whorf hypothesis, it too is due for a period of quiescence.

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